White Lake
General Management Plan

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WHITE LAKE STATE LAKE

GENERAL MANAGEMENT PLAN

Department of Environment, Health, and Natural Resources

Division of Parks and Recreation

Planning and Development Section

February, 1996

INTRODUCTION

Planning is an essential element of effective and efficient park administration and management. The North Carolina General Assembly acknowledged its importance by passing state parks system legislation that includes planning requirements.

The 1987 State Parks Act (G.S.114-44.7 through 114-44.14) stipulates that a State Parks System Plan be prepared. The plan was completed in 1988 and revised in 1994. It evaluated the statewide significance of each park, identified duplications and deficiencies in the system, described the resources of the system, proposed solutions to problems, described anticipated trends, and recommended means and methods to accommodate trends.

The State Parks Act also requires each park to have an individual general management plan. The general management plans are required to:

> *...include a statement of purpose for the park based upon its relationship to the System Plan and its classification. An analysis of the major resources and facilities on hand to achieve those purposes shall be completed along with a statement of management direction. The general management plan shall be revised as necessary to comply with the System Plan and to achieve the purpose of the [State Parks Act].*

The general management plan (GMP) is to be a comprehensive five-year plan of management for a park unit. GMP's function to:

1. describe park resources and facilities;
2. state the purpose and importance of each park unit;
3. outline interpretive themes and propose locations for informational and interpretive facilities;
4. analyze park and recreation demands and trends in the park's service area;
5. summarize the primary laws guiding park operations;
6. identify internal and external threats to park natural and cultural resources, and propose appropriate responses;
7. identify and set priorities for capital improvement needs;
8. analyze visitor services and propose efficient, effective, and appropriate means of responding to visitor needs; and
9. review park operations and identify actions to support efficient and effective park administrative procedures.

This GMP for White Lake State Lake, developed with public involvement, is intended to serve these purposes.

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I. DESCRIPTION OF WHITE LAKE STATE LAKE

LOCATION AND ACCESS

White Lake State Lake is located in the eastern coastal plain of North Carolina in Bladen County, approximately halfway between Wilmington and Fayetteville.

U.S. 701 provides the primary access to the region. White Lake is located about six miles east of Elizabethtown and can be reached via US 701, NC 41, and NC 53 (Figure I-1).

LAND BASE AND VISITOR FACILITIES

Unlike other nearby state lakes, the state does not own any park land at White Lake or provide any public access to the lake. Division-owned property consists only of a 0.6-acre lot on the southern shoreline of the lake. This lot gives staff access to the lake and a place to dock both the Division's boat and the Wildlife Resources Commission's patrol boat. Public access from this lot to the lake is not provided.

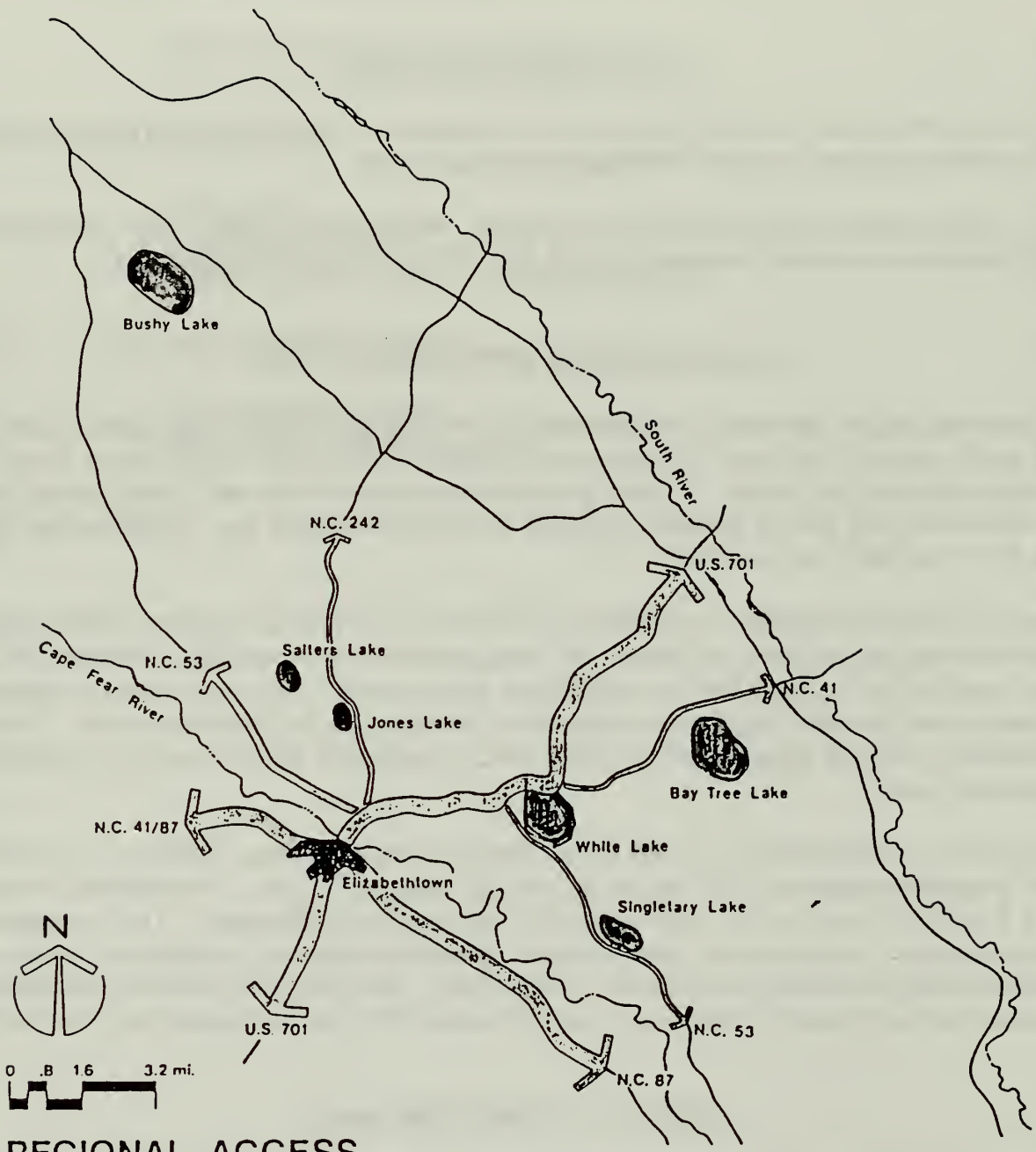
The 1977 *State Lakes Master Plan* outlined two alternatives for park development at White Lake, both of which included land acquisition. No land acquisition ever took place, however, and the land identified for the park has been subdivided and developed. This and other development around almost the entire lake makes acquisition of land for park facilities impractical. Without a land base, Division responsibility at White Lake is confined to the lake itself up to the mean high-water mark.

White Lake is a Carolina bay of 1,068 acres. Similar to other bay lakes, White Lake is shallow, with a maximum depth of 10.5 feet and an average depth of 7.5 feet. As mentioned, most of its 4.8 miles of shoreline has been subdivided and extensively developed. This development includes motels, rooming houses, campgrounds, permanent residences, mobile home parks, and weekend cottages that comprise the town of White Lake. The clear water and sandy lake bottom, coupled with the extensive development, serves to make White Lake a regional tourist attraction.

HISTORY OF THE PARK AREA

The first white settlement of the region occurred when Highland Scots claimed land along the Cape Fear River in 1740. Farming, principally concentrated along river plantations, became important economically. Farming became less important economically as turpentine and tar production and timber harvesting became the region's chief sources of income. By 1860, as the region's merchantable forest resources became increasingly depleted, agriculture underwent a rejuvenation, and cotton farming became popular.

Figure I-1.



REGIONAL ACCESS
STATE LAKES
bladen county

White Lake was originally known as Granston Lake, according to the Collet Map of 1770, and later as Bartram Lake, named for William Bartram, who owned property and operated a grist mill near the lake. The lake appeared as White Lake on the Shaffer Township Map in 1886.

Statewide interest in the Carolina bay lakes emerged in the 1820s. During the 1827-1828 legislature, a bill was enacted that made it unlawful for anyone to record for private ownership the lands covered by the waters of any lake within North Carolina. This law followed the limitation of the private recording of unappropriated marsh or swamplands that was enacted during the previous legislature.

The General Assembly of 1922 passed legislation that provided that

> *White Lake, Black Lake* [now Bay Tree Lake], *Waccamaw Lake, and any other lake in Bladen, Columbus, or Cumberland counties containing 500 acres or more shall never be sold nor conveyed to any person, firm or corporation, but shall always be and remain the property of the State of North Carolina for the use and benefit of all the people of the State.* (Chapter 8, G.S. 7544)

This legislation confirmed the status of the 1,068-acre White Lake as a state-owned, public trust resource. In 1929, the law was amended to include all state-owned lakes having 50 acres or more and to charge the Department of Conservation and Development with administrative responsibility of these newly established recreation areas.

Settlers in the Bay Lakes region generally led lives of marginal subsistence. Due to an influx of laborers that worked in the naval stores, lumber, and cotton industries, the population increased beyond the soil's capacity to support it. With the decline of the cotton industry and the exhaustion of the tar, pitch, turpentine, and timber industries, a large segment of the population by 1935 found themselves on submarginal land with no means of moving into an area of greater productivity.

During the Great Depression years of the 1930s, the federal government undertook conservation programs to create jobs. These programs resulted in facilities being constructed at nearby Jones and Singletary lakes as well as the acquisition of 34,544 acres of land in the Bladen Lakes area. No land was acquired for public purposes at White Lake, however, nor were any facilities constructed, and the state's property interest continued to be limited to the lake.

White Lake began to attract tourists and outside interest around 1922, after road access was provided. The town of White Lake was chartered in 1923, although the charter was repealed in 1925. The town was rechartered in 1951. In 1927, the lake was surveyed for the first time. At that time, docks and pavilions along the lake shore were found to be owned by 30 different parties. Due to its clear water and sandy bottom — in contrast to other bay lakes — White Lake has always been the most popular of the state lakes. As a result, business activity and development catering to seasonal tourism continued to grow.

The first permits for new construction on the floor of White Lake were issued by 1928, and in that year a proposal was made to have "*...all docks, boat houses, pavilions, and other structures as well as boats... take out permits and operate under State License.*" The proposal was made

because it seemed *"...to be the proper way to control certain abuses which the more frequent use of the lakes by the public will necessarily entail."*

In 1928, large sections of the lake were staked off and fishing prohibited in these areas during breeding season; restocking efforts also took place.

The Second Biennial Report of the Department of Conservation and Development (June, 1928) recommended that to make the state lakes *"...of greatest permanent benefit to the people of the state an area of shore line should be acquired sufficient to guarantee full access and use by the public."* This was not done.

Prior to 1929, only new docks had to be permitted, but during that year *"all docks and buildings had to be operated under permit. This change was brought about with very little friction and with general acceptance by those claiming the docks."* Permits were also required to operate boats on White and Waccamaw lakes. An additional fee was charged for boats used for commercial purposes. The launching of a large passenger boat on White Lake in 1930 created a stir. During this period, a part-time game warden cared for the lake.

The existence of closed structures on state lakes surfaced as an issue, particularly because of water pollution concerns, and no new closed structures were allowed (Third Biennial Report of the Department of Conservation and Development, June 1930). No further permits for the repair or construction of closed buildings were issued, and the removal of such structures falling into disrepair began to be required.

Administering White Lake became more difficult with continuing development, inadequate financial resources for administration, and increasing regulations. The regulations were designed to *"...so properly control such private use that the public shall not be excluded from its rightful use of such state property which has been devoted to recreational purposes."*

Fish restocking efforts continued but with little success, partly because of over-fishing, partly because of the supposed absence of proper fish food, and partly because of the lack of protected areas against the shore.

The bathing public increasingly demanded that all boats using oil in their operation be prohibited. With no steady outlet to the lake, during dry seasons oil spilled on the water accumulated. Eliminating gas engines and fast-moving boats on the lake was considered but not done. Restricting the lake to small craft including canoes, row boats, and sailboats was deemed preferable so that *"...the greatest good to the greatest number of users of the lake would be secured..."* (Fourth Biennial Report of the Department of Conservation and Development, June 1932).

Lack of funds for employing wardens, the difficulty of securing sufficient evidence to convict parties of infractions of regulations, and no state land ownership of the shore continued to be the chief difficulties in administering White Lake. By 1936, most of the closed buildings over the water had been removed (Sixth Biennial Report of the Department of Conservation and Development, June 1938).

By 1938, conditions at White Lake seemed to be worse. Buildings, shacks, and all sorts of miscellaneous structures and equipment, including ferris wheels, cluttered the shore. Complaints continued to be received about the operation of speed boats and about oil spread over the water by outboard motors. An application to operate an airplane on the lake was denied because of public safety concerns (Seventh Biennial Report of the Department of conservation and Development, June 1938).

Employing a lake warden at White Lake during the summer months resulted in better control of the uses of the lake and a reduction in some of the objectionable practices. In spite of the lake warden's efforts, however, written and verbal complaints concerning the use of high-powered speed boats on White Lake continued to be received. These complaints were that speed boats were emptying oil on the lake, disturbing bathers, and, at times, endangering the safety of other users of White Lake. To address these concerns, in the spring of 1941 Department representatives met with a large group of land owners and others to discuss ways and means of regulating the use of White Lake for the benefit of all its users (Ninth Biennial Report of the Department of Conservation and Development, June 1942).

Increasing use and popularity of White Lake during the early 1940s and the often conflicting nature of the uses of the lake spurred the establishment of comprehensive state lake regulations in 1943 and an increased budget for administration. The regulations were administered by State Parks, which, at that time, was a branch of the State Forestry Division. The increased budget came partly from increased receipts from the fees set up in the regulations. With these funds, better patrol equipment was purchased, buoys were installed to mark a safety zone for bathers, and a summer lake warden was employed (Twelfth Biennial Report of the Department of Conservation and Development, June 1948).

Since 1943, the state lakes regulations have been revised four times: in 1956, 1959, 1969, and 1974. In 1954 and the first eight months of 1955, a prolonged drought resulted in very low water levels at White Lake. To partially alleviate the handicap this low water level placed on the users of White Lake, regulations were amended to permit the lengthening of piers and docks. The rains brought by the hurricanes in August and September of 1955 raised the water level back to near normal.

In early 1960, the state finally purchased a small parcel of land at White Lake to provide administrative access. The 0.6-acre area provides a base for operations and a place to store supplies and a boat.

Problems relating to the construction of piers and bulkheads, congestion, and safety increased during the 1960s as the town of White Lake experienced increased use and development. In response, the Board of Conservation and Development adopted a resolution at its July 1971 meeting instituting a six-month moratorium on the issuing of permits for lake structures. A purpose of the moratorium was to encourage local authorities to enact land-use ordinances necessary to help alleviate problems associated with White Lake. By this time, more than 200 piers and other structures had been built. Largely as a result of this moratorium, the town of White Lake adopted a zoning ordinance in October, 1972. Despite these measures, White Lake continued to suffer from over-use, shoreline damage, and impacts on water quality.

Prior to 1959, the Division sold special licenses for boats operated on state-owned lakes, with the bulk of these sold at White Lake and Lake Waccamaw. Receipts from licenses plus legislative appropriations were used for the purchase, placement, and maintenance of safety pilings to protect swimming areas and for lake wardens, patrol boats, and equipment.

In 1959, the Boating Safety Law was enacted, and the responsibility for its administration and enforcement was delegated to the Wildlife Resources Commission, including licensing of all boats with motors over 10 horsepower. The 1965 General Assembly passed legislation making the Wildlife Resources Commission the exclusive state agency authorized to regulate the operation of water craft, and thereafter the Division lost the revenue but retained the responsibility for protection, preservation, and administration of state-owned lakes (Twenty-first Biennial Report of the N.C. Department of Conservation and Development, 1966). Subsequently, state lakes regulations were revised in 1969 to delete all references to boats, boating, and law enforcement regarding boating regulations.

In December of 1977, the State Lakes Master Plan was published. The plan contains two alternative proposals for the acquisition and development of public park land along the shoreline, both for the same location along the northwest shore. Neither proposal was ever implemented.

The shoreline of White Lake has been subdivided and developed over the years, and today the town of White Lake nearly circumscribes the lake. Land once proposed for park acquisition has been developed, and White Lake continues to suffer from overuse, shoreline damage, and impacts on water quality. In 1994, 280 piers, 95 seawalls, and 286 buoys were permitted at White Lake. Several private beaches once providing public access have closed, and only two such areas remain.

Despite its problems, White Lake remains a popular regional recreation area. On summer weekends and holidays, thousands of people flock to the lake, and it is not unusual to have two hundred or more boats and jet skis in use at the same time.

II. PARK PURPOSES

MISSION STATEMENT OF THE NORTH CAROLINA STATE PARKS

The North Carolina state parks system exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features, and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide education opportunities that promote stewardship of the state's natural heritage.

WHITE LAKE STATE LAKE PURPOSE STATEMENT

White Lake has a long history of public ownership. In 1827, legislation passed that expressly forbid the lands covered by the waters of any lake within North Carolina from being recorded for private ownership. In 1911, the General Assembly passed legislation declaring that certain lakes containing 500 acres or more, including 1,068-acre White Lake, were not to be sold but should "*...always be and remain the property of the State of North Carolina for the use and benefit of all the people of the State.*" The legislation thus clearly indicated the public trust nature of White Lake.

While the lake and lake bed have been and remain public property, the lake shore above mean high water has been privately owned, except for a narrow state-owned pier access. Increasingly intensive use of the popular lake prompted the adoption of the first state lake regulations in 1943. Those regulations and subsequent revisions have not effectively maintained the lake's natural and public trust values. No land has been set aside for public park purposes, and public access to the lake is subject to private control. The lack of state-owned land precludes the establishment of an operational state park unit. In addition, the lakeshore has been almost completely developed over the years, resulting in the proliferation of bulkheads and boats and related problems with congestion, safety, and water quality.

White Lake is classified as a Carolina Bay, and it is an outstanding recreational resource. Due to its clear water and sandy bottom, which is in contrast to other bay lakes, White Lake has always been the most popular state lake. Sunbathing and water sports - in particular swimming and boating - are the main recreational activities.

White Lake offers scenic vistas of its clear water, boating activity, and shoreline. In places, beautiful, large, bald cypress trees draped with Spanish moss line the shore or grow in the shallow water.

Carolina bays occur only in North Carolina, South Carolina, and Georgia. The bays are found in the loose, unconsolidated sands that form a cover within the Atlantic Coastal Plain, with the

greatest concentration of bays in Bladen County. Their origin has long been a matter of speculation and debate. Carolina bays are shallow, oval depressions oriented in a southeast-northwest direction. White Lake is an example of a water-filled Carolina bay. It has a shallow bottom with the deepest point southeast of the bay's center, and it has a raised sand rim, best developed at the southeast end. Only a few bays still contain water. White Lake's geological significance has been devalued by ditching and draining, the removal of vegetation, and the development of surrounding areas. The lake is now nearly circumscribed by its namesake town.

White Lake State Lake exists so its valuable recreational and scenic values can be protected and because of its value as a public trust resource. The Division is charged with preserving these values and providing park experiences that promote pride in and understanding of North Carolina's natural heritage.

III. SUMMARY OF INTERPRETIVE THEMES

The 1987 State Parks Act defines the purposes of the state parks system. It establishes that:

> *The state of North Carolina offers unique archaeologic, geologic, biologic, scenic and recreation resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.*

It further provides that:

> *Park lands are to be used by the people of this State and their visitors in order to promote understanding of and pride in the natural heritage of this State.*

One of the best methods of fulfilling these purposes is through environmental education. The definition of environmental education as set forth in *The North Carolina Environmental Education Plan* is as follows:

> *Environmental Education is an active process that increases awareness, knowledge and skills that result in understanding, commitment, informed decisions and constructive action to ensure stewardship of all interdependent parts of the earth's environment.*

Because the Division does not have any park land, public facilities, or staffing at White Lake, and because the resource has been negatively impacted by man's activities, no interpretive themes for the lake have been developed.

IV. PARK AND RECREATION DEMAND AND TRENDS

POPULATION TRENDS

The primary service area of White Lake State Lake is identified as Bladen County, in which the lake is located, and the surrounding counties of Columbus, Cumberland, Duplin, Pender, Robeson, and Sampson.

The total 1990 population of Bladen, Columbus, Cumberland, Duplin, Pender, Roberson, and Sampson counties was 574,142, 8.66 percent of the state's population. The region's population grew during the 1980s by 5.7 percent, less than half the 12.7 percent growth experienced by the entire state. Four of the region's seven counties — Bladen, Columbus, Duplin, and Sampson — actually lost population during the 1980s. Most of the region's growth took place in Cumberland and Pender counties (Figure IV-1).

According to the Office of State Budget and Management, outside of catastrophic events such as a depression or outbreak of a rapidly spreading, incapacitating disease, the most influential forces affecting the need for state services are the growth and shifts in population. The region's overall population growth rate is expected to slow during the 1990s, a trend also predicted for the state as a whole as in-migration from other states slows. Growth and shifts in the population of the region, therefore, are not expected to affect the State Lakes to any significant degree during the 1990s.

Population shifts in various age segments will also take place. Over the past 10 years, the number of women in their prime childbearing years has declined with the aging of the 1940s baby boomers, and the result has been a decline in births. The number of women in their late teens to middle thirties is projected to change little over the next 20 years. Assuming a stable childbearing rate, the number of children in the newborn to four-year-old category will remain stable.

Public-school-age population (5 to 17) has declined significantly during the past 10 years. It has now reached a plateau that is expected to continue. The college age (18 to 24) population has declined in recent years and is likely to continue its small decline before stabilizing at the end of the century. The percentage of the 18-to-34 population started to decline in 1990.

In contrast, the growth in the middle-aged and elderly population during the next 20 years is a virtual certainty, thanks to the baby boom of the 1940s. The fastest-growing age segment over the next two decades will be the over-85 segment, followed by the 75-to-84 and then the 65-to-74 segments.

Over the past 10 years, the elderly population has become an increasingly vital political force. For the short-term future, it is anticipated that the growing elderly population will confine its demands primarily to health, nursing homes, activities of daily living, and protective services. Numerous surveys have shown these areas to be of primary concern to the elderly.

Figure IV-1.

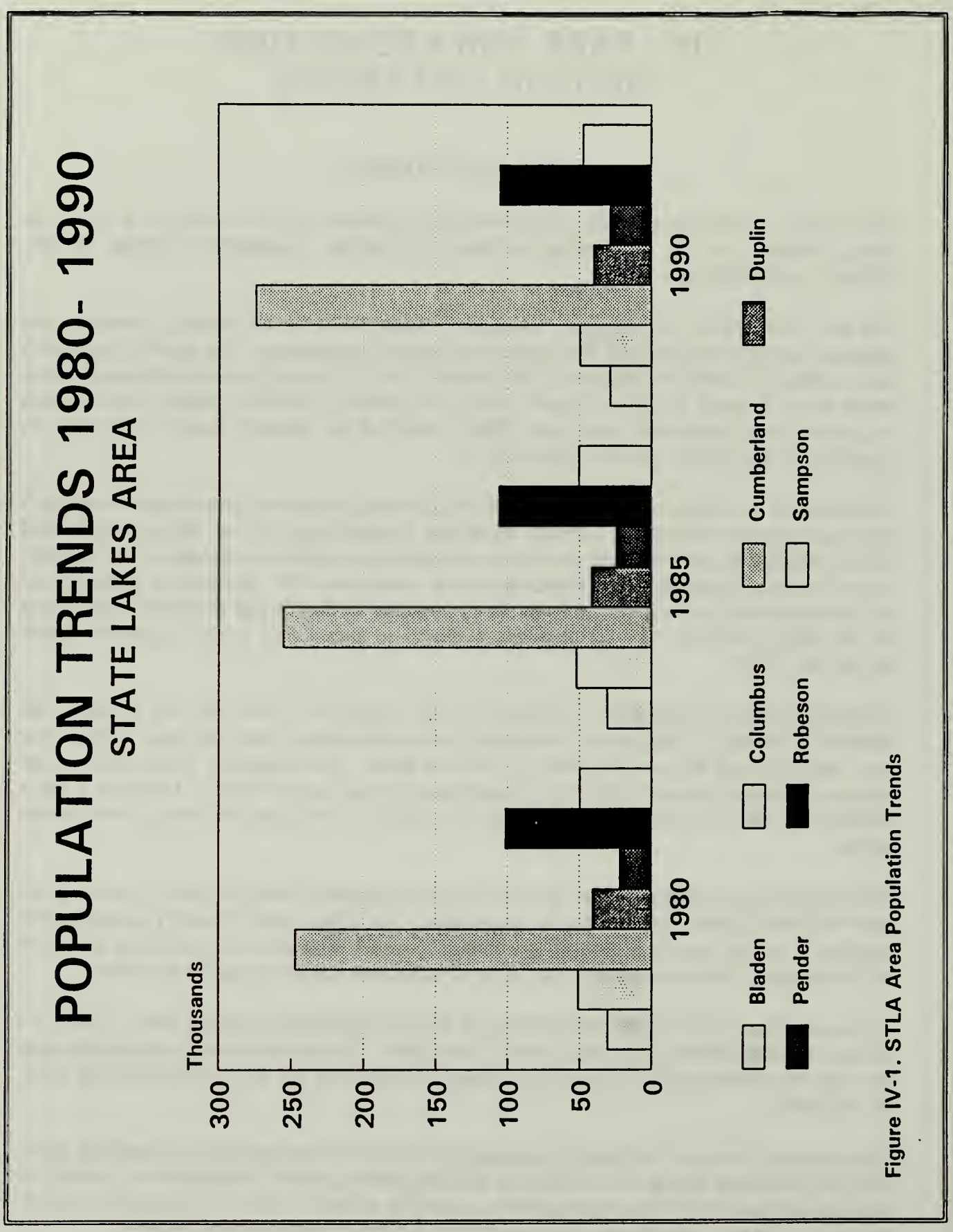


Figure IV-1. STLA Area Population Trends

While shifts in population age groups are particularly significant in school and some social programs, these age-group changes that will be taking place will not have a significant effect on White Lake State Lake over the next five to 10 years.

The town of White Lake has a small year-round population, approximately 410. In the summer season, however, the population explodes as vacationers, people with second homes at the lake, and area residents flock to the lake. The White Lake Chamber of Commerce estimates that as many as 200,000 people visit White Lake during the summer. Eight or nine thousand people are normal for a summer weekend, with a holiday weekend bringing it up to 15,000.

POPULATION DENSITY

White Lake's primary service area is, except for Cumberland County, a predominantly rural area. The region's population density (95 people per square mile) is well below that of the state as a whole (136). Bladen, Columbus, Duplin, Pender, and Sampson counties' population densities are all far below the state average (Figure IV-2).

OUTDOOR RECREATION PARTICIPATION IN NORTH CAROLINA

The North Carolina Outdoor Recreation Participation Survey was mailed to 3,100 randomly selected residents in the spring of 1989. Forty-five percent, or 1,399 people, returned completed surveys. Each person receiving the survey was asked to estimate the number of times the members of his household had participated in each of 43 activities. The survey results provide good insight into the current participation of North Carolinians in a wide range of outdoor recreational activities.

The five most popular outdoor recreation activities in North Carolina are walking for pleasure, driving for pleasure, viewing scenery, beach activities, and visiting historical sites. Three out of every four households participated in walking for pleasure at least once in the past 12 months (Table IV-1). In addition to the five most popular activities, over fifty percent of the households that responded participated at least once in the following activities: swimming (in lakes, rivers, or oceans), visiting natural areas, picnicking, attending sports events, visiting zoos, and freshwater fishing.

Figure IV-2.

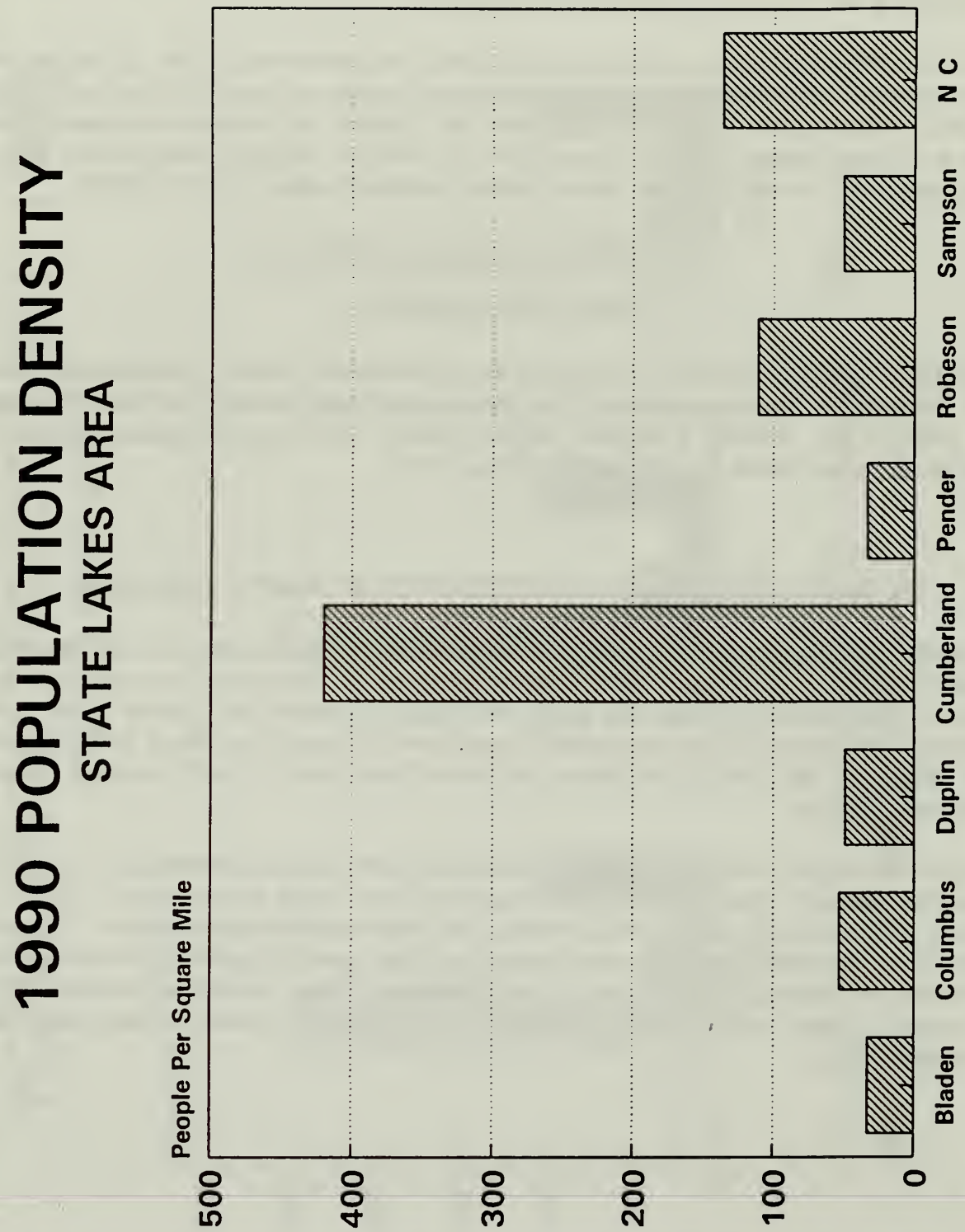


Figure IV-2.STLA Area Population Density

Table IV-1. Outdoor recreational activities ranked by popularity.

Rank	Activity	Percentage of Households Participating
1.	Walking for Pleasure	75%
2.	Driving for Pleasure	72
3.	Viewing Scenery	71
4.	Beach Activities	69
5.	Visiting Historical Sites	62
6.	Swimming (in Lakes, Rivers, and Oceans)	54
7.	Visiting Natural Areas	53
8.	Picnicking	52
9.	Attending Sports Events	52
10.	Visiting Zoos	51
11.	Fishing - Freshwater	50
12.	Use of Open Areas	41
13.	Swimming (in Pools)	40
14.	Fishing - Saltwater	38
15.	Attending Outdoor Cultural Events	35
16.	Bicycling for Pleasure	32
17.	Other Winter Sports	31
18.	Camping, Tent or Vehicle	29
19.	Softball and Baseball	28
20.	Hunting	28
21.	Use of Play Equipment	28
22.	Power Boating	26
23.	Trail Hiking	26
24.	Jogging or Running	24
25.	Basketball	24
26.	Nature Study	22
27.	Golf	22
28.	Target Shooting	20
29.	Water Skiing	19
30.	Camping, Primitive	14
31.	Tennis	14
32.	Use Motorcycles, Dirt Bikes, ATV's	13
33.	Use Four Wheel Drive Vehicles	13
34.	Canoeing and Kayaking	13
35.	Horseback Riding	12
36.	Volleyball	12
37.	Downhill Skiing	12
38.	Football	11
39.	Soccer	7
40.	Sailboating	7
41.	Skateboarding	6
42.	Cross Country Skiing	2
43.	Windsurfing	1

PRIORITIES OF PUBLIC OUTDOOR RECREATION FUNDING

The North Carolina Outdoor Recreation Survey asked residents a series of questions in order to identify and rank future demand for public outdoor recreation. Future demand was determined by asking them which activities they would have tried more often had adequate facilities been available. Respondents were then asked to rank these activities in order of importance. A scoring system was used assigning each activity a rating of high, moderate or low future demand based on the survey results.

In the second part of the analysis, the respondents' level of support for publicly funded outdoor recreation activities was determined by asking them to identify and rank those activities to which government should give highest priority when spending public money. The same scoring system used to analyze unmet demand was then applied to the survey results, with each activity receiving a high, moderate or low rating in public support for public funding.

In the final part of the needs analysis, the two ratings for each activity were combined to produce a score of one to nine that reflected both future demand and public funding priorities. The activities that ranked high in both future demand and support for public funding received the highest priority in the needs assessment. Support for public funding was given higher priority than expressed demand (Table IV-2).

Because no publicly owned areas and facilities are provided at White Lake, these priority recreation activities — if they continue to be provided — must be provided by the private sector.

Table IV-2. Public Priorities for Future Outdoor Recreation Activities

Activity	Code	Future Demand	Support for Public Funding
Walking for Pleasure	1	High	High
Camping, Tent or Vehicle	1	High	High
Picnicking	1	High	High
Beach Activities	1	High	High
Fishing - Freshwater	1	High	High
Attend Outdoor Cultural Events	1	High	High
Visiting Natural Areas	2	High	Moderate
Use of Play Equipment	2	High	Moderate
Visiting Zoos	2	High	Moderate
Visiting Historical Sites	2	High	Moderate
Bicycling for Pleasure	3	Moderate	High
Swimming (in Pools)	3	Moderate	High
Viewing Scenery	4	Moderate	Moderate
Hunting	4	Moderate	Moderate
Trail Hiking	4	Moderate	Moderate
Use of Open Areas	4	Moderate	Moderate
Target Shooting	4	Moderate	Moderate
Swimming (Lakes, Rivers, Ocean)	4	Moderate	Moderate
Fishing - Saltwater	4	Moderate	Moderate

AREA OUTDOOR RECREATIONAL OPPORTUNITIES

There are six state park units within a 50-mile radius of White Lake. Five of these park units — Bay Tree Lake State Park, Bushy Lake State Natural Area, Jones Lake State Park, Lake Waccamaw State Park, and Singletary Lake State Park — also contain Carolina bays. The Lumber River State Park is the other nearby state park. A brief description of these state park units follows.

Bay Tree Lake State Park, Bladen County

Bay Tree Lake is a 1,418-acre Carolina bay that offers beautiful scenic vistas of its open water and extensive undeveloped shoreline. A portion of the shoreline and the lake have been adversely affected by private development, lessening its natural values. The state owns 609 undeveloped acres of land at the lake's western end. Plans for development include picnicking, camping, dock and boat launch, and support facilities.

Bushy Lake State Natural Area, Cumberland County

Bushy Lake is an excellent example of a "low bay," with its interior having the appearance of an open savannah with scattered trees, shrubs, and a variety of grasses. Although not a lake, it does contain shallow water much of the year, as well as several small ponds. Limited access is provided for low-intensity recreational use such as nature observation, hiking, and environmental education and research.

Jones Lake State Park, Bladen County

Jones Lake State Park contains two Carolina bays, the 224-acre Jones Lake and the 315-acre Salters Lake. Its outstanding biological resources include high quality aquatic and shoreline communities typical of bay lakes. The state owns the entire shoreline of both lakes. Swimming, hiking, picnicking, camping, fishing, boating, and nature study are offered.

Lake Waccamaw State Park, Columbus County

Lake Waccamaw is the second largest Carolina Bay lake in North Carolina, containing 8,938 acres. It is a unique habitat that is home to several species of fish, clams, and snails found nowhere else in the world. The 1,732-acre land base includes longleaf pine ridges, wet pocosins, pine savannas, and swamp forests. Park facilities are limited, but include a picnic area and swimming pier.

Lumber River State Park — Scotland, Hoke, Robeson, and Columbus Counties

Lumber River State Park, created in 1989, is in an early state of development. The state park and state river stretch 110 miles from state road 1412 in Scotland County to the North Carolina-South Carolina state line. The slow-moving blackwater river offers opportunities for canoeing, boating, and fishing. Facilities are currently being developed on land located south of US 74 in Robeson County. The master plan calls for picnicking areas, family camping, trails, river access areas, and support facilities.

Singletary Lake State Park, Bladen County

Singletary Lake State Park contains 1,221 acres of land and water. The park land completely surrounds the 572-acre Carolina bay. The park has two group camps that are available for rent to non-profit youth and adult organizations. The camps provide a setting for unique camping experiences by offering organized groups overnight interpretation and education and extended stay recreation in a peaceful, natural setting. Fishing is offered to the public on a limited basis.

Table IV-3. Road Mileage Between State Lakes

	Bay Tree Lake	Bushy Lake	Jones Lake	Salters Lake	Singletary Lake	Lake Waccamaw	White Lake
Bay Tree Lake	X	30.7	12.2	14.7	12.2	51	5.5
Bushy Lake	30.7	X	18.5	16	32	60.4	25.2
Jones Lake	12.2	18.5	X	2.5	13.4	42	6.7
Salters Lake	14.7	16	2.5	X	16	44.4	9.2
Singletary Lake	12.2	32	13.4	16	X	52	6.7
Lake Waccamaw	51	60.4	42	44.4	52	X	45.4
White Lake	5.5	25.2	6.7	9.2	6.7	45.4	X

In addition to state park system units, there are other public areas used for outdoor recreation located in the White Lake area.

Bladen Lakes State Forest, Bladen County

The state-owned Bladen Lakes State Forest covers over 31,000 acres, including land around Jones, Singletary, and Salters lakes. In addition to building up the growing stock of timber on previously over-cut and burned out areas, the forest also serves to provide recreation including group camping and hunting. The forest is an officially designated state game land, called the Bladen Lakes Game Land. The forest is also used for educational purposes, particularly the demonstration of forestry management practices.

North Carolina Game Lands

In addition to the Bladen Lakes Game Land mentioned above, two other large game lands lie within 50 miles of White Lake State Park. They are the 13,295-acre Green Swamp Game Land, located in Brunswick County approximately three miles north of Supply, and the 1,585-acre Sutton Lake Game Land, in New Hanover County. The Green Swamp Game Land is leased from the Nature Conservancy and the Sutton Lake Game Land from Carolina Power & Light Company.

PRIVATE FACILITIES OPEN TO THE PUBLIC

At the time of publication of the 1977 master plan, four primary private recreational facilities were available for public use at White Lake. Since that time, two of the four beaches have been closed to the general public. Crystal Beach and Goldston's Beach still provide public swimming areas. In addition to parking, bathhouse/beach, and pier facilities, these two establishments also provide recreation and amusement areas, gift shops, and restaurants. Camp Clearwater has developed areas for camping and picnicking, and White Lake Marina provides a boat ramp that is available for public use for a fee.

A legal public right-of-way apparently exists at White Lake, although access is across privately developed facilities at Goldston's Beach. Even so, few options exist but to use the privately owned bathhouse, concession, and pier facilities. This beach access is currently chained off during the off season.

BOATING CAPACITY

Power boating and water skiing are two popular activities at White Lake. Statewide, 26 percent of households participate in power boating and 19 percent in waterskiing annually. These activities ranked 22nd and 29th, respectively, in popularity (Table IV-1), but they were not viewed by statewide survey participants as public recreation priorities (Table IV-2).

No standards are used by North Carolina state agencies for various forms of recreational use of lakes. The Wisconsin Department of Natural Resources has established criteria to minimize user conflicts on its lakes and also provide a high-quality recreational experience by specifying minimum space requirements for various forms of recreational uses of lakes. These standards follow:

Activity	Space Requirements
Swimming	185 swimmers/acre
Fishing	8 acres/boat
Boating	15 acres/boat
Water Skiing	20 acres/boat

Louisiana uses one ski boat per 40 acres of water and 20 acres per power boat. While these standards are certainly subject to debate, they can be used to judge use rates for lakes.

With a surface area of 1,068 acres, a maximum of 53 boats could be used for water skiing on White Lake at any one time without exceeding the Wisconsin standard designed to minimize user conflicts and provide a high quality experience. Seventy-one boats without skiers could be accommodated. With half of the boats used for skiing and half for boating, a total of 60 boats could be accommodated.

It should be noted that buoys, piers, no-wake zones, and shallow water decrease the amount of water surface available for recreational boating. White Lake has 286 mooring buoys and 280 piers. Commercial piers may extend up to 375 feet in length; private, joint private and public piers are limited to 225 feet in length. Piers and buoys render at least 100 acres of the lake unusable for water skiing. No-wake zones and shallow water also significantly decrease boating acreage.

While no recent figures are available, during the summer of 1979 the Division conducted a survey of boating usage. At that time, an average of 48 boats per day were launched at the public boating ramps on Saturdays and Sundays from April 1 through September 10. No count of launchings at private ramps was made. On 16 of the 48 days of the survey, the number of boats launched exceeded 53 boats. According to Singletary Lake State Park and Wildlife Resources Commission staff, boating use has increased significantly since that time.

In addition, there are now approximately 225 power boats moored permanently during the summer months at the 286 permitted mooring buoys. Approximately 525 additional boats are

permanently moored at piers during the summer. Most of these 750 or so permanently based boats are used on the lake at least once per week during warm months, and many are used more frequently.

The explosion of jet skiing has also crowded the lake. The local Wildlife officer estimates that from 70 to 100 jet skis may be in use at the same time on a summer weekend. Sailboats and other watercraft also share the lake.

While the boating capacity of White Lake is certainly subject to debate, it seems clear that the boating capacity — particularly on weekends and holidays during the summer season — exceeds reasonable use standards. Not only does this diminish the recreational experience, but it also creates public safety and natural resource concerns.

V. SUMMARY OF LAWS GUIDING PARK MANAGEMENT

There are many federal and state statutes, state and federal executive orders, and administrative rules and policies that govern the operation of the state parks system. A thorough listing and discussion of these will be available in the Systemwide Policies Manual once it is developed.

This chapter includes a brief discussion of the primary legal basis for the existence and operation of the state parks system and White Lake State Lake. The definitions of and Departmental duties concerning state-owned lakes are found primarily in Chapters 113 and 146 of the North Carolina General Statutes. Those chapters deal with natural resource conservation and development, and state real property, respectively.

STATE LEGAL MANDATES

North Carolina Constitution

Article XIV, Section 5 of the North Carolina Constitution sets overall policy by broadly defining the conservation and protection of natural resources and the acquisition of such resources as a proper function of government. The amendment reads in part as follows:

> *It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina and its political subdivision to acquire and preserve park, recreation, and scenic areas, to control and limit the pollution of our air and water, to control excessive noise, and in every other appropriate way to preserve as a part of the common heritage of this state its forests, wetlands, estuaries, beaches, historical sites, open land, and places of beauty.*

State Parks Act

The State Parks Act (G.S. 113-44.7 through 113-44.14) sets forth a mission statement for the state parks system. It states that the system functions to preserve and manage representative examples of significant biological, geological, scenic, archaeological, and recreational resources, and that park lands are to be used by the people of the state and their visitors and descendants in order to promote understanding of and pride in the state's natural heritage.

The State Parks Act also calls for development and periodic revisions of a System Plan to achieve the mission and purpose of the state parks system in a reasonable, timely, and cost-efficient manner. The Act describes System Plan components and requires that public participation be a component of plan development and revisions.

The State Parks Act also calls for the classification of park resources and development of general management plans (GMPs) for each park. GMPs are to include a statement of park purpose, an analysis of major resources and facilities, and a statement of management direction.

Powers and Duties of the Department of Environment, Health, and Natural Resources

The Department is authorized to make investigations of the resources of the state and to take such measures as it may deem best suited to promote the conservation and development of such resources. In addition, the Department may care for state forests and parks and other recreational areas now owned, or to be acquired by, the state. (G.S. 113-8)

North Carolina Environmental Policy Act of 1971

Recognizing the profound influence that man's activity has on the natural environment, the General Assembly passed the Environmental Policy Act "*to assure that an environment of high quality will be maintained for the health and well-being of all...*"

The Act declares that:

> *It shall be the continuing policy of the State of North Carolina to conserve and protect its natural resources and to create and maintain conditions under which man and nature can exist in productive harmony. Further, it shall be the policy of the State to seek, for all its citizens safe, healthful, productive, and aesthetically pleasing surroundings; to attain the widest possible range of beneficial uses of the environment without degradation, risk to health or safety; and to preserve the important historic and cultural elements of our common inheritance. (G.S. 113A-3)*

While there are other General Statutes that concern the state parks system and the environment, the above-described statutes, along with Article XIV, Section 5, of the North Carolina Constitution, largely define the purposes of the state parks system and serve to guide the operation of state park system units.

State Lakes Legislation

The North Carolina General Assembly in 1911 passed legislation declaring that certain lakes containing 500 acres or more, including the 1,060-acre White Lake, were not to be sold or conveyed, but should:

> *... always be and remain the property of the State of North Carolina for the use and benefit of all the people of the State. (1911, c.8)*

That legislation and similar legislation passed in 1929 that lowered the acreage for state lakes to 50 acres clearly indicated the public trust nature of state lakes. Managing state lakes as a

public trust resource includes the prevention of unlawful private encroachment on attendant public rights.

Erection of Structures

A permit is required in order to erect any dock, pier, pavilion, boathouse, bathhouse, or other structure upon the floor of, or in or upon, the waters of any state lake (G.S.146-13). The Department of Administration has delegated the Division of Parks and Recreation as the permitting agency.

Recreational Use of State Lakes

All recreation, except hunting and fishing, in, upon, or above any state lake may be regulated in the public interest by the Division of Parks and Recreation (G.S. 146-18). The Wildlife Resources Commission (WRC) is charged with regulating hunting and fishing. Fishing is allowed in state parks, and all WRC regulations apply. Hunting is prohibited in state park system units.

Lake Level

To prevent lake drainage, it is *"...unlawful for any person, firm or corporation to dig any ditch under any portions of U.S. Highway No. 701, N.C. Highway No. 53 and SR 1515 which surround that body of water in Bladen County known as White Lake below 66 feet above sea level."* The town of White Lake may, after obtaining a permit, dig for water, sewer, and storm or drainage sewer lines (Chapter 116, Session Laws of 1987).

Control Over Parks

General Statute 113-36 authorizes the Department to make reasonable rules for the regulation of the use by the public of state parks and state lakes. It authorizes the Department to construct and operate within state parks and state lakes and any other areas under its charge suitable public service facilities and conveniences and charge and collect reasonable fees for their use. It also authorizes the granting of concessions to private individuals or companies.

Dredging and Filling

The Department has jurisdiction over any excavation or filling project begun in any state-owned lakes (G.S.113-229). The dredge-and-fill statute provides detailed conditions and procedures necessary to process and issue a permit. It also addresses permit compliance. Questions regarding dredging and filling should be directed to the Division of Coastal Management in Wilmington, North Carolina (919-395-3900).

FEDERAL LAWS

Clean Water Act

In addition to being protected by the state's dredge-and-fill statutes, White Lake's remaining wetlands also receive some protection from Section 404 of the federal Clean Water Act. The waters of White Lake, including its wetlands, are waters of the United States within the meaning of the Clean Water Act, and, thus, any dredging or filling in the waters of White Lake may require permitting by the U.S. Army Corps of Engineers. Activities in wetlands for which permits may be required include, but are not limited to: placement of fill material; ditching activities; land clearing involving relocation of soil material; land leveling; most road construction; and dam construction (33 USC 1344). The Division will avoid undertaking construction located in wetlands unless there is no practical alternative and all practical measures are taken to minimize harm to the wetland.

STATE LAKES MASTER PLAN

The State Lakes Master Plan, which includes White Lake State Lake, was completed in 1977. The plan serves as a guide for development and management of park resources. It includes an analysis of cultural and natural resources as well as site analysis and development recommendations.

The master plan still serves to guide overall park development. During the general management plan process, the existing master plan was reviewed to determine if master plan proposals are still valid or if modifications are needed. GMP evaluation determined that changes to the master plan are needed. These changes are detailed in Chapter VII.

VI. NATURAL AND CULTURAL RESOURCE MANAGEMENT

NATURAL RESOURCE MANAGEMENT POLICY

The Division of Parks and Recreation's approach to natural resource management is directed by the North Carolina Constitution and the State Parks Act, both of which require the prudent management of natural resources. The constitution sets the overall policy by broadly defining the conservation and protection of natural resources and the acquisition of such resources as a proper function of government. The State Parks Act states that unique archaeological, geological, biological, scenic and recreational resources are a part of the heritage of the people that "*...should be preserved and managed by those people for their use and for the use of their visitors and descendants.*"

The North Carolina state parks system plays an important role in maintaining, rehabilitating and perpetuating the state's natural heritage. The natural resources of the state parks system are: high quality, rare or representative examples of natural communities; native plants and animals; geological features and landforms; water resources; and the natural processes that affect these resources. The primary objective in natural resource management will be the protection of natural resources for their inherent integrity and for appropriate types of enjoyment while ensuring their availability for future generations.

It is the Division's policy that natural resources will be managed by allowing natural environments to evolve through natural processes with minimal human influence. Natural resource management will not attempt solely to preserve individual species or processes; rather, it will attempt to maintain all the components and processes of a park's naturally evolving ecosystems. When intervention is necessary, direct or secondary effects on park resources will be minimized to the greatest extent possible. Intervention of natural processes may occur:

1) to correct or compensate for the previous human disruption of natural processes;
2) to protect, restore or enhance rare species;
3) to protect, restore or enhance significant archaeological resources;
4) to construct, maintain, improve or protect park facilities; and,
5) to prevent danger to human health or safety.

All park facilities will be designed, constructed and maintained to avoid adverse impacts to high quality natural communities, rare plant and animal species, major archaeological sites and other natural and cultural resources.

NATURAL COMMUNITIES

Although White Lake covers 1,068 acres and has a shoreline of approximately 4.5 miles, the lake and the surrounding area have been heavily developed and used for intensive recreation for decades. The Division of Parks and Recreation owns less than one acre of land on the southwest side of the lake. Virtually all of the shoreline has been developed and permanently altered, and the swampy bay communities that historically surrounded the lake have been ditched, drained, and filled. Although the lake is a popular fishing area, it is also heavily used by motorized boats. Because the lake averages only 7.5 feet in depth, the boat traffic constantly mixes the lake, disturbing any vegetation that occurs naturally. Consequently, with the exception of approximately 50-75 acres of privately owned forested wetlands on the lake's northwest shore, there are virtually no terrestrial or aquatic natural communities of any significance at White Lake.

The Natural Heritage Program has no records of high quality or rare natural communities or species at White Lake, and the Division's Systemwide Plan, which is a comprehensive analysis of the state park system's assets and needs, ranked the lake's archaeological, biological, geological, and scenic resources in the lowest percentile.

NATURAL RESOURCE MANAGEMENT ISSUES

Despite the absence of significant species or natural communities at White Lake, there are several resource management issues that require the Division's attention.

Water Level

Like all Carolina Bay Lakes, White Lake has a low sand ridge around most of its perimeter, and since there are no significant feeder streams, surface runoff from the surrounding watershed is minor. Groundwater inflow to the lake is still not completely understood, and it appears that rainfall and evaporation are by far the most significant factors affecting lake water levels.

The swampy bays surrounding the lake have played an important role in times of high water, however. Historically, when the lake's water level was high, drainage occurred through wetlands on the lake's northwest shore. Although bisected by Highway 41, these wetlands are essentially intact and still drain excess water into Turnbull Creek, which empties into the Cape Fear River. Over the last 30 years, most of the wetlands around the lake have been drained and filled, and much of the northwestern portion of the lake's shore, particularly the Turtle Cove subdivision, has been plagued with flooding during periods of high water. Problems have persisted through the early 1990s, when the developers at Turtle Cove removed a drainage culvert, causing fear of widespread flooding. New culverts were put in place in October 1993, and the drainage problems appear to have been resolved.

The owner of the last remaining forested wetlands adjacent to Turtle Cove has sought unsuccessfully to obtain a US Army Corps of Engineers permit to fill these wetlands. The permit was denied in 1994, and after threatening a lawsuit, the owner has withdrawn his objections and the wetlands will apparently remain intact. Division field staff at Singletary Lake were

instrumental in bringing these ditching and filling activities, some of which were illegal, to the attention of the appropriate state and federal agencies. Field staff should continue to carefully monitor all ditching and filling activities around the lake. Any repairs or replacements to any of the existing drainage culverts should be inspected to ensure that no culverts are placed below an elevation of 66 feet above mean sea level.

Water Quality

Many lake users have expressed concerns about the lake's water quality. While there have been compliance problems with the Town of White Lake's sewer system, the Division of Environmental Management is unaware of any major spills, leaks, or malfunctions that have affected water quality. DEM staff have routinely monitored the lake, and have always found the water to be clean, clear, low in nutrients, and within prescribed quality standards for body contact recreation.

Although many residents have complained about increased algae levels and water turbidity, studies conducted at White Lake by the Wildlife Resources Commission have indicated that the amount of aquatic vegetation in the lake is not excessive and that, in fact, it provides significant food and cover for fish. Recent surveys have suggested that increased turbidity is caused by the high level of motorized boat traffic on the lake, which causes fragile aquatic vegetation to break off, float to the surface, and create large mats. Lake shore residents have apparently confirmed that motor boats are largely responsible, since increased vegetation and turbidity are noticeably higher on weekends and holidays, when motorized boat traffic is also much higher. The problem is accentuated during dry periods when the lake level is below normal. Vegetation problems and turbidity decrease after Labor Day when boating use drops.

It has been suggested that the turbidity problem be eliminated by banning or restricting motorboats on the lake. Although this has received widespread support, efforts to enact a ban or restrict the size or numbers of boats have so far been unsuccessful. Division personnel should continue working with the Wildlife Resources Commission and other state and town officials to document the possible correlation between motor boat traffic and increased vegetation and water turbidity.

VIII. PARK OPERATIONS

REGULATING STATE LAKES — PROBLEMS AND OPTIONS

Introduction

In 1990, the Deputy Secretary of the Department of Environment, Health and Natural Resources requested a legal opinion regarding responsibilities and authorities of the Department regarding state lakes. Associate Attorney General Timothy D. Nifong responded to this inquiry on August 24, 1990. Deputy Secretary Dr. Lynn Muchmore asked for clarification on (1) the definition of the term "state lake"; (2) the legal status of such lakes, including their ability to be divested by the state; (3) EHNR's regulatory authority over and in state lakes; and (4) EHNR's management responsibilities for state lakes, including the ability to delegate those duties to other governmental agencies.

These questions arose from continued management concern over the effectiveness of current state lake regulations in conserving natural resources and protecting public-use rights while accommodating the legitimate rights of adjacent property owners.

State lakes are a special category of state-owned lakes. All other "non state-owned lakes" may be considered private lakes. State-owned lakes may be generally assumed to include any lake in which North Carolina holds fee simple title to more than 50 percent of the lands lying beneath the lake's water at mean high water (Nifong-1990).

The Department's duties concerning state-owned lakes are found in Chapters 113 and 146 of the General Statutes dealing with natural resource conservation and development, and state real property, respectively. According to Nifong, the fact that these lakes are state property gives them special status, which increases state management duties for, and regulatory authorities in, them. *"In the case of those lakes explicitly designated under North Carolina laws as 'state lakes,' EHNR is charged with managing those properties as a public trust resource, including the prevention of unlawful, private encroachment on attendant public rights."* (Nifong-1990).

G.S. 146-13 governs the construction of piers on state lakes. This statute requires any person, firm, or corporation desiring to erect upon the floor of, or in, or upon the waters of any state lake any dock, pier, pavilion, boathouse, bathhouse, or other structure to first secure a permit to do so from the Department of Administration or the agency it designates to issue such permits. The Department of Environment, Health, and Natural Resources has been designated as the permitting agency, and the Division of Parks and Recreation administers the permit system.

According to the legal review provided by Nifong,

> *EHNR has broad regulatory authority over state lakes as public trust resources. Consequently, governmental regulations reasonably related to EHNR's resource protection authority will be valid. Such regulations could validly restrict boating*

> *on state lakes, including a complete ban on the use of motorboats under appropriate circumstances.*

One of the key issues involving the administration of state lakes is the accommodation of adjacent private property interests. The present system of pier permits was initiated largely to accommodate landowner interest while protecting the right of public access, use, and enjoyment of the state lakes. In the case of some state lakes, it is arguable that the administration of this system has failed to protect the natural resource and assure continued public access, use, and enjoyment. According to the Nifong report,

> *a private landowner adjacent to any state-owned lake, as a riparian owner has a right of access to navigable waters of the lake, including the right to 'wharf out' (i.e., to construct piers or docks to provide such access) subject to regulatory procedures controlling the permissibility and placement of those structures. ... Even where private riparian landowners on such lakes have a property right of access to the lake by virtue of its navigability, reasonable state restriction of that private right for a public purpose will be valid.*

The effect of current state lake regulations is to establish a process through which permits shall be issued with very little provision for limiting the number, size, or placement of such structures upon the waters of state lakes. As a result, White Lake has more than 280 piers, 95 seawalls, and 286 mooring buoys permitted under present regulations. Lake Waccamaw has more than 450 piers, 89 seawalls, and 89 mooring buoys. Bay Tree Lake, with its more recent and relatively limited development, has 32 piers and 10 seawalls.

The fundamental issue regarding state lake regulations is whether or not they adequately provide for long-term protection of state lakes' scenic value, public recreation benefits, and natural resource diversity.

Erosion Control

Because of the large water surface area and shallow depth of most state lakes, they are subject to moderate shoreline erosion from wind-generated wave action. These effects are mitigated by the maintenance of a natural shoreline condition in which various forms of vegetation tend to buffer the effects of the wind-driven waves. The sections of shoreline exposed to prevailing winds can and do experience varying degrees of erosion, however. Property owners in these areas have been permitted to construct a variety of seawalls, boat ramps, bulkheads and other stabilizing structures. Permitting these shoreline-hardening structures is contrary to natural resource processes. Further, such structures are probably not included in a riparian owner's right to "wharf out" to gain access to navigable waters.

The present state lake regulations regarding the permitting of seawalls do not comply with other regulations governing dredge-and-fill activities in state waters.

Recommendations:

1. The Division of Parks and Recreation should institute a moratorium on issuing seawall and boat ramp permits for a period of two years, pending the development of a comprehensive set of regulations consistent with applicable regulations of the Coastal Resources Commission and Army Corps of Engineers and consistent with protection of the state lakes as public trust resources.

   The administration of seawall permits, consistent with applicable dredge-and-fill laws and regulations is dependant upon establishment of a legally determined mean high-water mark at each state lake. Only Lake Phelps has a surveyed mean high-water reference datum (11.5 feet above mean sea level).

2. During the moratorium on construction of new seawalls, the Division of Parks and Recreation should conduct appropriate studies and surveys to establish and mark in the field the mean high water mark for Bay Tree Lake, Lake Waccamaw and White Lake.

Resource Protection

Currently, all state lake regulations apply equally to subject lakes. Without established criteria for restricting or denying permits, it may be only a matter of time before the shoreline of Lake Waccamaw and Bay Tree Lake are developed to the extent that White Lake is. There is little argument that the natural resource and scenic values of White Lake have been largely dissipated through extensive development of private and commercial piers, seawalls, and boat ramps. There is also evidence that the carrying capacity of the lake in terms of boating-related recreation has been exceeded, resulting in deterioration of the recreational experience and damage to the lake's hydrology.

Recommendation:

1. In order to better plan for the future protection of the natural resources at Bay Tree Lake and Lake Waccamaw, the Department should develop regulations and procedures to implement shoreline-management plans. A shoreline-management plan would evaluate the significance of natural resources and process, analyze the potential impact of adjacent private development, and designate appropriate sections of shoreline for varying degrees of development or protection. A method of controlling the density of piers and docks upon state lakes should be developed.

Structural Specifications

Current state lake regulations contain general limits on the length, placement, and configuration of permitted structures on state lakes. Additionally, there are size limits on various subcomponents of these structures such as platforms, pavilions, and patios. The general nature of these structural specifications has allowed an intriguing variety of imaginative configurations. Whereas the more elaborate and imaginative configurations may meet the letter of the current

regulations, the cumulative effect of such massive structures is, at best, mere degradation of the lakes' scenic shoreline. At worst, such elaborate structures far exceed an adjacent property owner's riparian rights and give the appearance of granting exclusive private use of public-trust waters.

The rewrite of state lake regulations in 1974 attempted to further restrict allowable pier configurations and to provide a mechanism for gradually eliminating non-conforming structures. The most notable effect of the 1974 regulations was the stricter limitation placed upon the storage of boats associated with piers. The regulations, however, also provided for virtually unlimited installation of mooring buoys spaced a minimum of 25 feet apart. If the intent of the 1974 rewrite of the regulations was to limit the number of boats stored on state lakes, it has largely failed with the dramatic proliferation of mooring buoys.

With regard to mooring buoys, another safety concern is the ultimate disposition of abandoned buoys and their associated anchors. Abandoned screw anchors on the floor of state lakes are a serious threat to public health and safety, and the Division of Parks and Recreation devotes substantial effort to discovering and removing these devices. Since the current state lake regulations do not adequately specify structural details for approved mooring buoys, a wide variety of devices is used.

Recommendations:

1. State lake regulations should be rewritten to include more definitive structural specifications for piers, buoys, and other permitted structures, including maximum and minimum dimensions and setbacks. The objectives of such structural specifications should be to provide minimum accommodation of riparian access rights, provide maximum protection of natural resource processes, and provide reasonable protection of state lakes' scenic and recreational values.

2. Regulations should be promulgated to accomplish the elimination of non-conforming piers within a reasonable time frame, such as within 10 to 20 years.

Permit and Lease Fees

The present set of state lake regulations provides for riparian property owners and others to apply for and secure permits to build and maintain various structures on state lakes. The permit application fee for construction, modification or reinstatement of an expired permit is $60. The application fee to transfer a permit to a new owner is $30. The application fee for nonconforming-use permits is $150. In addition to these initial fees, permittees are assessed annual fees based upon the type and size of permitted structure. These fees range from $15 annually for mooring buoys, boat ramps, and piers less than 50 feet in length to $60 per year for private piers greater than 150 feet in length, and $150 per year for commercial piers greater than 225 feet in length. These permit fees were increased in September 1991 after 15 years without an increase.

In recent years, the General Assembly has directed studies of regulations and fees associated with leasing submerged state lands for private or commercial purposes. Several states were surveyed

for comparable lease rates and administrative procedures. Preliminary recommendations to the General Assembly included the establishment of a lease fee schedule of approximately $.10 per square foot per year. The report's recommendations were criticized by environmentalists for being too lenient, considering the fair market value of large-scale coastal marinas and the attendant escalation of real property values associated with private marinas.

Computed on a square footage basis for a typical private pier with one platform, permittees pay less than 3¢ per square foot per year for the privilege of maintaining the pier on a state lake. A commercial pier constructed to its maximum length and width with one platform costs the permittee less than 2¢ per square foot per year. The placement of mooring buoys at a minimum distance of 25 feet from any adjacent structure or buoy in effect allocates a circular anchorage with a radius of 25 feet (an area of 1,964 square feet). Buoy permittees are charged less than 1¢ per square foot per year.

Preliminary recommendations of the Submerged Lands Review Committee suggested an annual leasing fee of $.10 per square foot. Although the sufficiency of this fee to compensate adequately for the loss of public-use rights is debatable, it appears that the current state lake pier permit fee schedule is very conservative.

Recommendation:

1. Any revision of the state lakes permit regulations should include an objective assessment of the current fee schedule. This assessment should be consistent with the evaluation of public-use rights foregone by permitting the installation of permanent structures on submerged state lands. The establishment of a fee schedule for submerged lands other than state lakes should be fully considered in the revision of state lake permit fee schedules.

IX. LAND ACQUISITION NEEDS

LAND ACQUISITION STATUS AND FUTURE NEEDS

White Lake State Lake contains 1,068 acres of water. In addition, the state owns a 0.60-acre lot on the southern shoreline of the lake. This lot provides staff access to the lake and a place to dock the Division's patrol boat. Public access from this lot to the lake is not allowed.

The original master plan for White Lake called for the creation of a 150-acre "community park" on the northwest shore of the lake. This community park would have included a swimming area, visitor center complex, and developed recreation sites. Since the master plan was written, the land identified for the park has been subdivided and developed, making the acquisition of land for park facilities impractical.

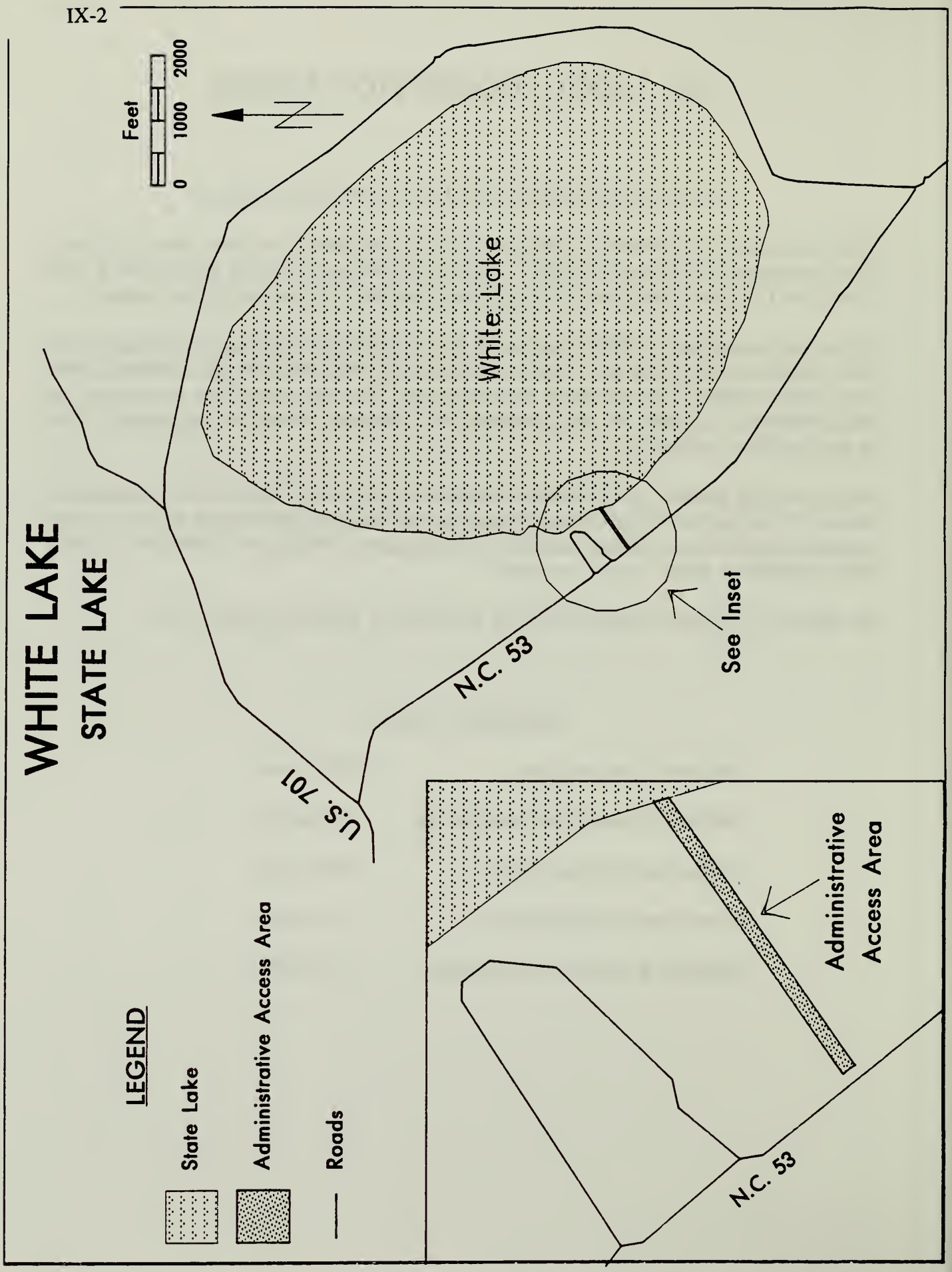
During the GMP process, the master plan development proposal for White Lake was abandoned. Because of the high level of private development around the entire shoreline of the lake, no land remains for public access and state park facility development at White Lake. Therefore, no future land acquisition at White Lake is proposed.

See Figure IX-1 for the location of the staff access site at White Lake State Lake.

SUMMARY TABLE

1994 size of the state lake	1,068.0 acres
1994 size of administrative access site	0.6 acres
Original master planned needs	150.0 acres
Revised master planned needs	0.0 acres
Additional acquisition recommended	0.0 acres

Figure IX-1.


WHITE LAKE
STATE LAKE
Feet
0
1000
2000
White Lake
U.S. 701
N.C. 53
See Inset
LEGEND
State Lake
Administrative Access Area
Roads
Administrative
Access Area
N.C. 53